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Draft Transportation Plan (and Planning) Development

National Transportation Stakeholders Forum

May 15, 2013

Buffalo, New York

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Considerations in Transportation Plan Development

- Reaffirms the involvement of key stakeholders in both planning and carrying out transportation activities
- Takes into account comments on the 2007 and 2009 plans, the WIPP Transportation Plan, the DOE Strategy in response to the BRC and NAS findings, the DOE Transportation Practices Manual (DOE Manual 460.2-1A) and commercial best practices
- Outlines the planning process, involved parties, and schedules for activities that need to be completed prior to developing site-specific campaign plans
- Reaches back to address issues (both resolved and unresolved) from the NAS, the BRC, and SRG comments
- Establishes operating principles for NFST Transportation

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Relationship to Administration's Strategy for Management and Disposal of Used Nuclear Fuel

- The Plan focuses on the goals of the Strategy and the BRC recommendations to plan for and implement "prompt efforts to prepare for the eventual large-scale transport of used nuclear fuel and high-level waste to consolidated storage and disposal facilities"
- The objective is to start shipments by 2021, based on having a pilot storage site
- Similar to approach used by DOE and commercial best practices transportation planning activities, including WIPP and FRR
- Follows guidance outlined in DOE's Transportation Practices Manual

The Transportation Plan

- **The Plan:**
  - **Informs interested parties of the planning process and activities to be completed in order to ship UNF from stranded fuel sites**
  - **Outlines features of a working Transportation Plan by combining elements from successful shipments**
  - **Describes other documents that would inform the NTP as studies are completed and as decisions are made about site-specific campaigns**
- **The Plan is a "dynamic" plan that will be updated:**
  - **As policy is set**
  - **As issues are resolved**
  - **As decisions are made about specific campaign features such as routes, modes and scheduling and specific site shipments**

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Process to Develop The Transportation Plan

- State and tribal groups and other parties participate in developing the Plan
- DOE provided an annotated outline as a starting point to the Core Group of SRGs and Tribes in March
- DOE formed a Working Group - first webinar held April 24
- Two breakout discussion sessions today
- Webinars through the summer – at least monthly
- Final Draft Plan due September 2013 *(the Plan will continue to be developed and refined up to and through commencement of shipments)*

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Transportation Plan Organization

- The Plan is organized into ten Chapters
- First four describe the transportation system development process:
  - Introduction
  - Purpose and background (prior plans, issues)
  - Organizational roles and responsibilities (project participants-DOE, States, Tribes, Industry)
  - Transportation system development (technical studies, institutional, system design)

Transportation Plan Organization

- The next six chapters outline the transportation practices for operations:
  - System operations (routes, notification, pre-shipment planning, tracking, inspections)
  - Emergency considerations (preparedness, notifications, response)
  - Security
  - Communications
  - References
  - Appendices
- NOTE: Many details of operations will not be known until technical studies and evaluations are completed and policy decisions made

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Today's Breakout

- Record break-out session participants' feedback on prior experience with transportation planning and shipping campaigns (the good, the bad and the ugly)
- Identify key questions, areas of interest or gaps in plan (some known)
- Summarize results of discussion and suggestions
- Include pertinent information in the Transportation Plan

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Prior Transportation Planning and Shipping Experience

- Routes (and modes)
- Rail (inspection standards and processes, security and training)
- Requirements (regulations, agreements, policy)
- State and Tribal Participation and Communications (other stakeholders?)
- General Principles for Project Planning
- Unknowns (Legislation, Destination)

Issue: Routing and Modal Choice

- Currently looking at initial findings from the PNNL site report
- Absent destination(s), limited to initial segments to mainline rail
- Analyzing routing lessons learned, developing draft report for group review
- Mark Abkowitz (Vanderbilt University) has been researching currently available routing models/tools to determine what available products can be modified to meet NFST's and its stakeholders' planning needs
- Shipments will be primarily via rail, using dedicated trains (specific issue)
- Intermodal handling will be needed at some sites—to be informed by PNNL site report and subsequent discussions with site owners and host jurisdictions
- Objective is to minimize numbers of shipments and handling wherever possible (these are important risk drivers)

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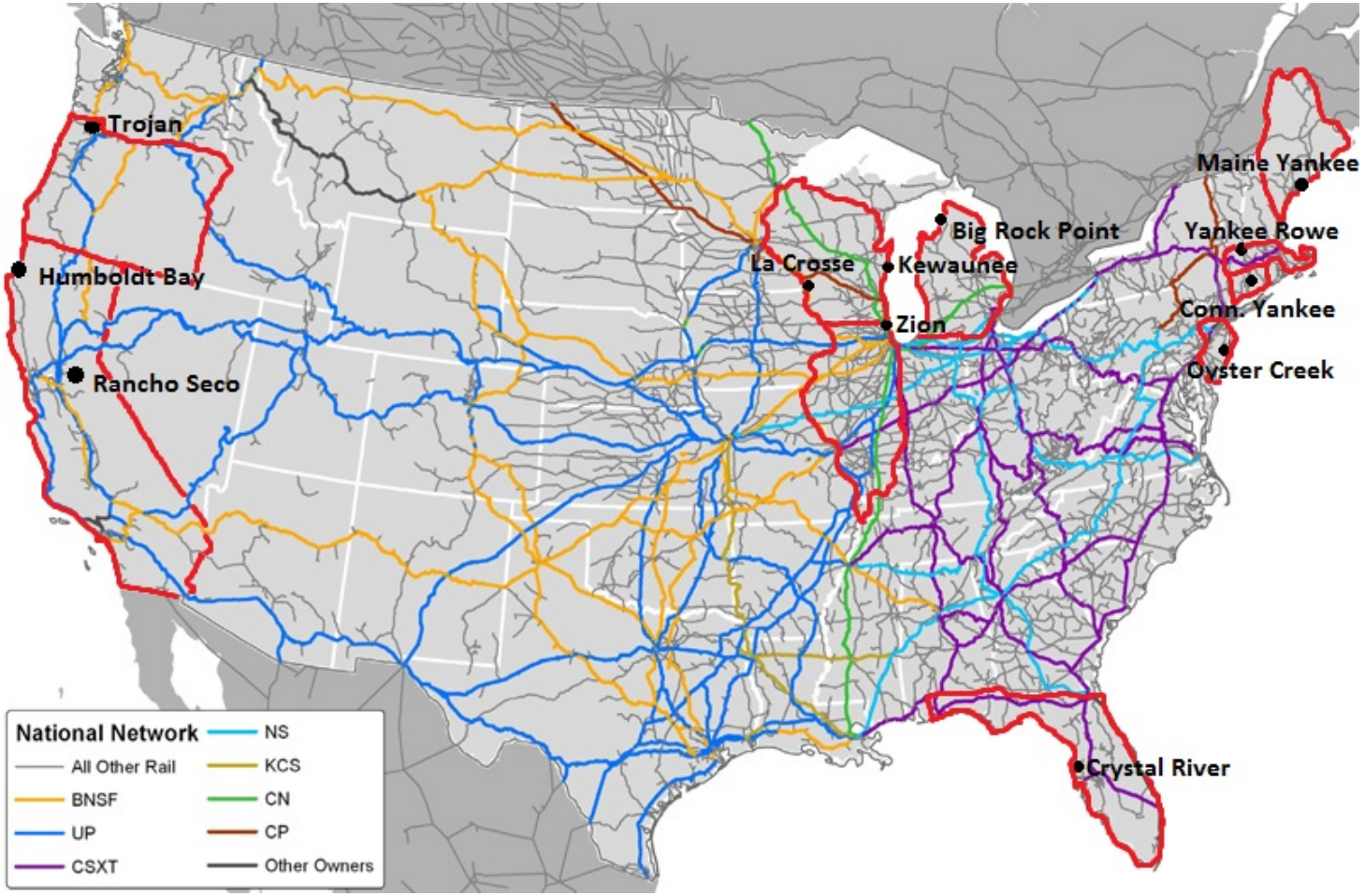
Stranded Reactors and Host States



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Potential Routing Criteria (from Initial Abkowitz Analysis)

- **Worker & other population risk**
  - Incident-free radiological exposure
  - Accident-related radiological exposure
  - Non-radiological consequences of accidents
- **Trip length & travel time**
- **Residential & daytime population exposure**
- **Traffic operations**
  - Usage
  - Shared facilities with passengers
  - Accident rates
  - Travel speed
- **Infrastructure configuration & condition**
  - Grade and curvature
  - Height, width and weight limitations
  - Number & types of grade crossings
  - Signals, control & detection systems
- **Proximity to iconic targets**
  - Schools
  - Stadiums, arenas & convention centers
  - Dams
  - Houses of worship
- **Environmentally sensitive areas**
  - Tribal lands
  - Waterways
  - National parks & forests
  - Wildlife refuges
- **Access to emergency response capability**
  - Police
  - Fire
  - Hospitals
- **Seasonal conditions (e.g., susceptibility to inclement weather)**
- **Proximity to safe havens & repair facilities**
- **Availability of diversion routes**

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Issue: Rail Operations (e.g., mode-specific inspections, training)

- Rail is a fundamentally different operating environment from truck and analogues do not always transfer
- There has not been a large scale cross country SNF shipping campaign conducted by rail since (TMI) the early 1990s – limited recent experience.
- We believe the appropriate focus should be on outcomes (safe, secure shipments) and not on prescriptively specifying how that is to be done
- Rail inspections are important to ensure top-quality track, rolling stock, etc. but there are occupational safety tradeoffs that must be addressed
- We invite stakeholders to comment on how the proper balance should be sought
- Tracking and monitoring technology has greatly advanced in recent years, how should we address this?
- Other operational issues such as contingency planning, inclement weather, avoidance during special events etc.—suggest past campaign lessons learned as a starting point

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Issue: Applicable Requirements

- Nuclear Regulatory Commission certified casks
- AAR Standard 2043 for railcars and testing
- Nuclear Regulatory Commission Advance Notification for States and Tribes
- Department of Transportation regulations for pre-shipment and in-transit inspections
- Department of Transportation regulations for routing

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Issue: State and Tribal Involvement in Planning

- During Transportation Plan development
  - Through participation in Working Group Webinars, at other meetings and the NSTF
  - By providing comments on draft materials
  - Through the State Regional Groups and Tribal Caucus meetings
- In Transportation System Planning
  - Section 180(c) evaluations
  - Training and exercises
  - Shipment planning
  - Assisting with site-specific issues for shutdown reactors
  - Communications and public information

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Issue: General Principles for The Transportation Plan and Project

- Emphasis on safe, uneventful transportation
- Transparent
- Collaborative
- Respectful of cultural and traditional practices
- Keeps commitments

Issues Whose Solutions Are Currently Unknown (and May Be Unknowable)

- No destination site or sites have been identified at this time
- We cannot know all the States and Tribes that will be along corridors, apart from those currently hosting shutdown sites
- We do not know at this time what regulatory structure will apply, although the BRC was clear in recommending "a new waste management organization should be subject to independent regulation of its transport operations in the same way that any private enterprise performing similar functions would be—in other words, the new organization should not receive any special regulatory treatment. This will help assure regulatory clarity and transparency." (p. 83)